



# JUB ENGINEERS, Inc.

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7/14/83

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July 14, 1983

Mr. Robert H. Boothe, Director  
Franklin County Planning Department  
1016 North 4th  
Pasco, Washington 99301

USEPA SF



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RE: PASCO LANDFILL - CONDITIONAL USE PERMIT - #C U P -82-6

Dear Mr. Boothe:

This letter is written to provide you with the information you requested relative to the Pasco Sanitary Landfill Conditional Use Permit. The format for the letter will be to re-state the concerns addressed by those requesting information with the provided information immediately following these statements.

For reference purposes I have provided a copy of your letter along with copies of the Benton Franklin Governmental Conference and Benton Franklin District Health letters as Attachments #1, #2 #3 to this letter.

First, I will address each of the items raised by Mr. Gary Karnofski in the Benton Franklin Governmental Conference letter.

1. VOLUME OF WASTE DISPOSED OF ON A DAILY AVERAGE

During 1982, 304,734 cubic yards of solid waste were disposed of at the Pasco Sanitary Landfill. This is equivalent to approximately 835 cubic yards of waste every day (assuming 365 days per year). For calculation purposes, we will assume the annual waste disposal to be 300,000 cubic yards per year, although increased solid waste loads are also projected in further calculations.

2. PRESENT LANDFILL LIFE EXPECTENCY (Present being pre-1982 Conditional Use Permit #C U P 82-6)

Previous to the issuance of #C U P 82-6 the amount of acres available at the Pasco Sanitary Landfill was 173.1 + acres. #C U P 82-6 adds 43.5 acres to the existing site but removes 7.7 acres previously available for a net addition of 35.8 acres. Therefore, the new Conditional Use Permit encompasses a site of approximately 208.9 acres.

### 3. JUSTIFICATION FOR ADDITIONAL ACREAGE

The justification for adding the additional acreage to the Pasco Sanitary Landfill is that it will increase the life expectancy of the site from 2 to 4 to 6 years depending upon whether solid waste volumes increase at a rate of 5%, 2% or have no increase at all. This additional acreage is certainly warranted since a safe site is required for the disposal of solid waste from the cities of Kennewick and Pasco and their outlying areas.

### 4. SPECIFIC WASTE TYPES TO BE HANDLED ON THE ADDITIONAL ACREAGE

The additional acreage will receive only those solid wastes currently approved for disposal. These are; domestic, light commercial, non-hazardous industrial, and non-toxic agricultural waste.

### 5. LIST OF ADDITIONAL WASTE HANDLING PERMITS NEEDED

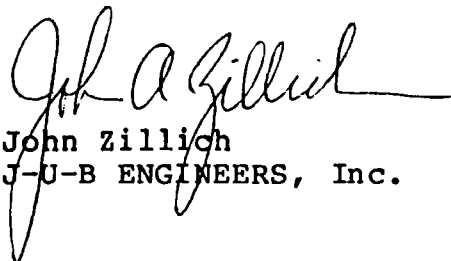
The only additional Waste Permit needed is a Discharge Permit for the sewage lagoon operation. An application for this Discharge Permit has been submitted to the Department of Ecology.

Secondly, Mr. Larry Kamberg requested a Hydrologiccal and Geological Profile of the northern most section of the Landfill. In order to develop a new Hydrological/Geological profile of the northern portion of the site, an additional well was drilled just southwest of the northwest section corner of section 22. See Figure II. This new well is located down gradient of the solid waste fill area and can also be used to determine the impact of the active fill area upon the groundwater at this location. Figure II shows the contours measured in December 1982 and illustrates that the well is properly placed for determining such an impact. Figure II also contains a cross section line for developing the geological/hydrological profile.

The geological/hydrological profile is presented in Figure III. The profile in Figure III was developed by projecting Well #4 to the cross section line. The profile was drawn by taking surface elevations from a topographic map, putting the geological information on the profile by taking this information from the well logs, and drawing the ground water elevation from measured ground water levels.

If you have any questions about this informaton, please call me at 783-2144.

Sincerely,



John Zillich  
J-U-B ENGINEERS, Inc.

JZ/lc  
Enclosures

Figure #I illustrates the boundary of the site as it is described in #C U P 82-6. The figure also illustrates the areas currently occupied by solid waste, industrial wastes, the sewage lagoon and other set aside areas. Buffer zones of 100 feet have been allowed around each of the industrial waste disposal sites and a buffer zone of 200 feet has been allowed around the sewage lagoon location. The buffer zone from the sewage lagoon is 200 feet outside of a proposed modification for the existing lagoon. Table I describes pre and post conditional use Permit (C U P 82-6) site characteristics. The life expectancy of the pre-#C U P 82-6 Landfill Site and the new additional acreage site described in #C U P 82-6 were calculated based upon filling the available areas to a depth of 30 feet. This would result in an over-all increased elevation at the finished fill of approximately 10 feet given a 3 to 1 waste-to-fill material ratio.

Three alternative projected waste volumes were included in the calculations. Those projected waste volumes being; (1) a static waste load no increase in the existing waste load, (2) a 2% annual increase in waste load and (3) a 5% annual increase in waste load. The 2% projection is expected to be most reliable since we would not expect the Tri-Cities to remain at a no growth situation and a sustained 5% increase over the life of the landfill would be a relatively large long-term growth rate.

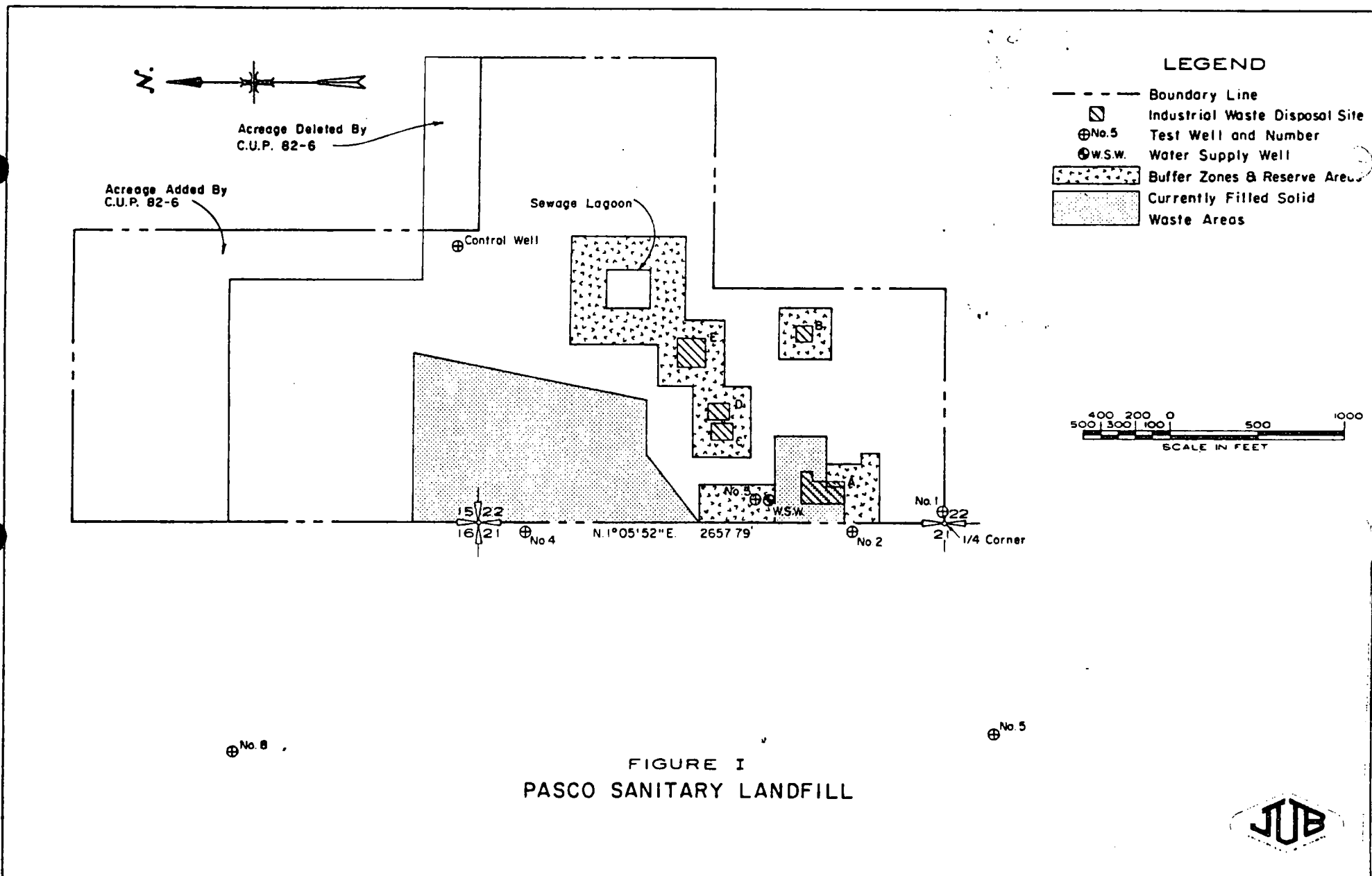
Table II indicates that the pre-#C U P 82-6 site would have a life expectancy which would vary between 19 and 14 years going from the static to 5% annual increase in waste volumes. Approximately 51.9 acres of the site are currently occupied and not available for waste disposal activities. This leaves 121.2 acres in the pre-#C U P 82-6 site and 157 acres in the #C U P 82-6 site. With the additional acreage, the life expectancy of the site would vary from 25 to 16 years going from the static to 5% annual increase in solid waste volume.

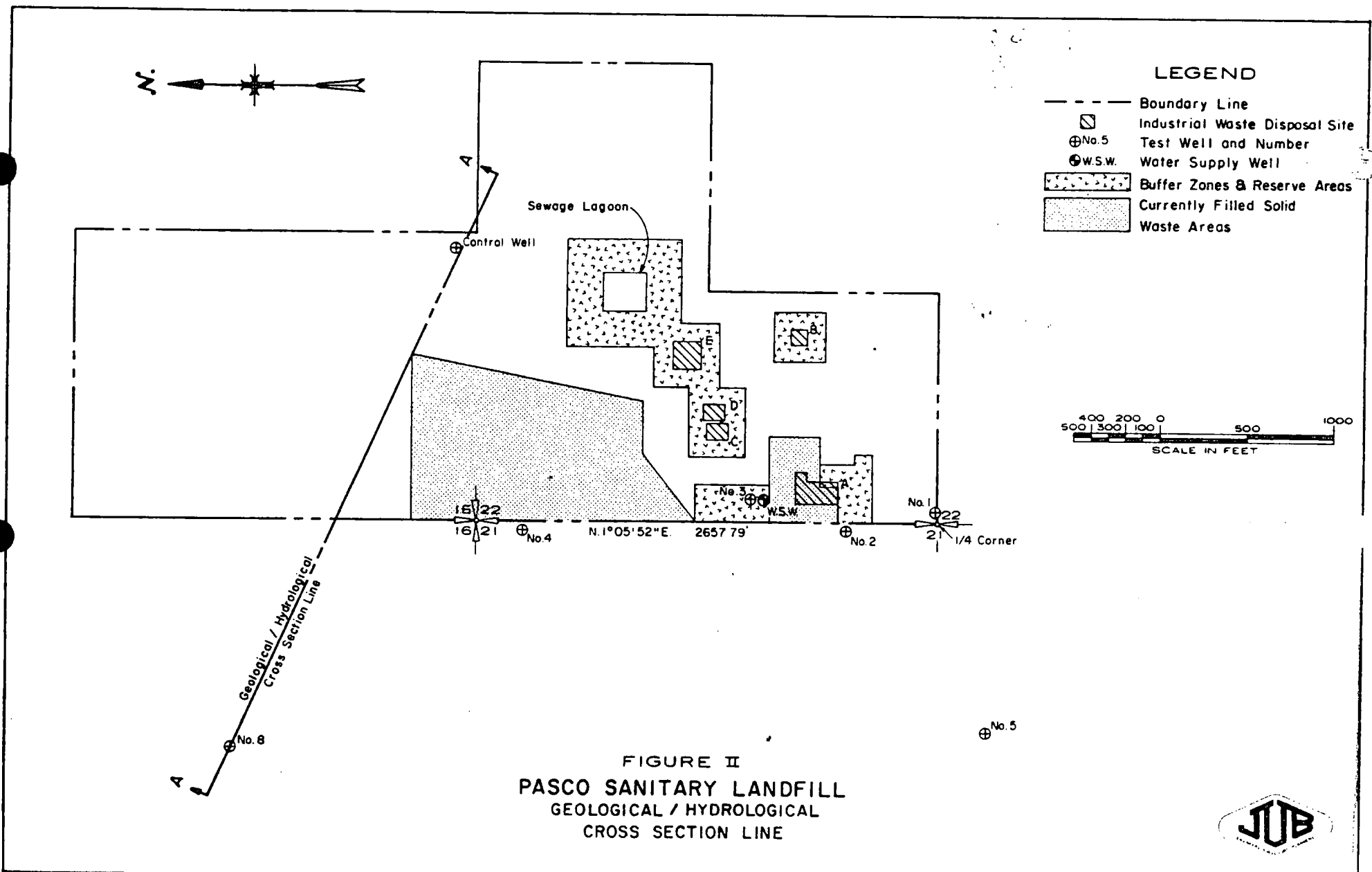
TABLE IPRE AND PAST CONDITIONAL USE PERMIT (C U P ) 82-6  
SITE CHARACTERISTICS

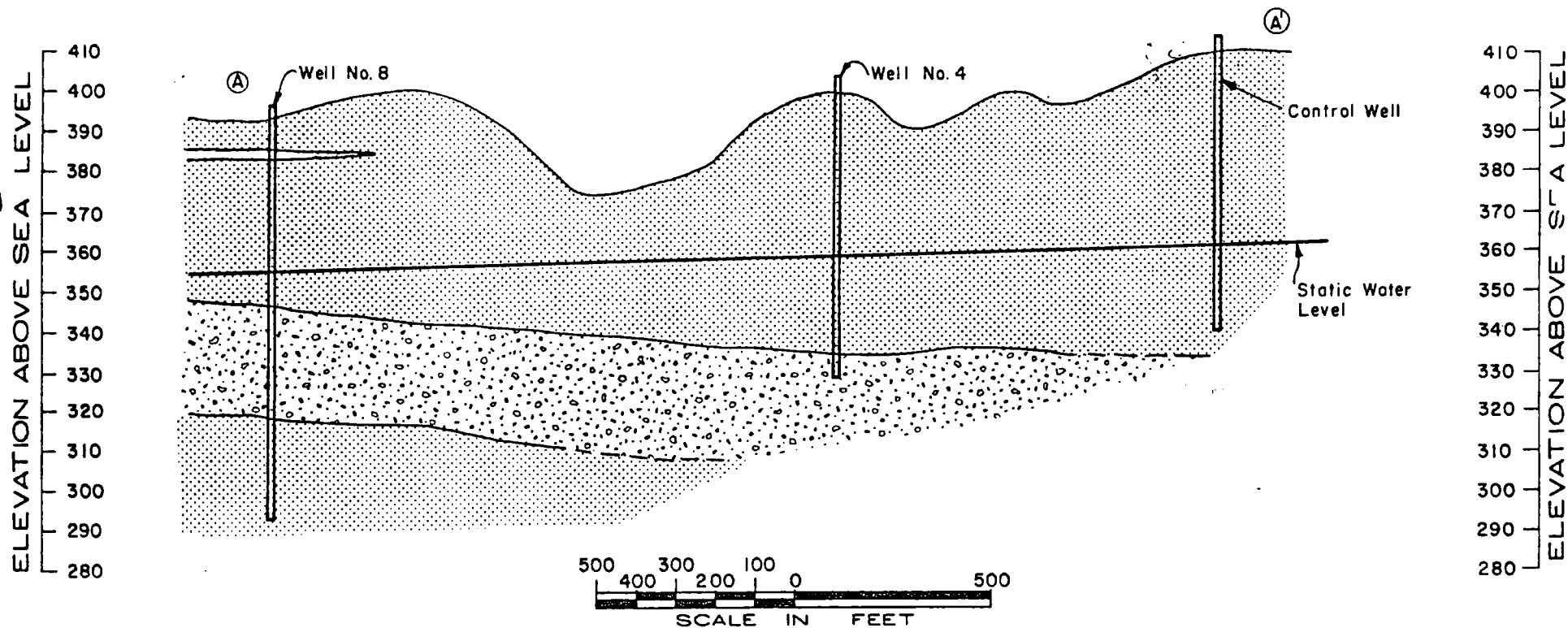
Pre-C U P 82-6 Land	=	173.1 Acres
New net Addition	=	35.8 Acres
C U P 82-6 Total	=	208.9 Acres
Currently Occupied Land	=	51.9 Acres
Pre C U P 82-6 Available Land	=	121.2 Acres
C U P 82-6 Available Land	=	157.0 Acres
Fill Rate	=	300,000 yd year
Depth of Fill	=	30 ft.

TABLE IIPASCO SANITARY LANDFILL LIFE EXPECTANCIES (YEARS)  
RELATIVE TO PRE 1982 AND CURRENT CONDITIONAL USE PERMIT  
GIVEN A STATIC, A 2% ANNUAL INCREASE AND A 5% ANNUAL INCREASE  
IN WATER VOLUME

	<u>STATIC</u>	<u>2% ANNUAL INCREASE</u>	<u>5% ANNUAL INCREASE</u>
Pre 1982 Conditional Use Permit	19	16	14
Present Conditional Use Permit	25	20	16







# LEGEND




-  Sand
-  Clay
-  Sand Boulders / Gravel

FIGURE III  
**PASCO SANITARY LANDFILL**  
 GEOLOGICAL / HYDROLOGICAL  
 PROFILE OF NORTHERN PORTION OF SITE